

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A method of communications by making an access from a first communication device located outside a home network to a second communication device on the home network, the method comprising:

transmitting a prescribed message from the first communication device to an access server device corresponding to a home gateway device provided at the home network by specifying an access number/address corresponding to the home gateway device;

carrying out an authentication procedure for authenticating the first communication device according to a prescribed authentication method between the access server device and the first communication device upon receiving the prescribed message at the access server device;

transferring the prescribed message through a prescribed access network from the access server device to the home gateway device corresponding to the access number/address specified by the prescribed message, when the authentication procedure is successfully completed; and

transferring the prescribed message from the home gateway device to the second communication device through the home network after converting the prescribed message according to a protocol supported by the second communication device, when the prescribed message is received by the home gateway device from the access server device which is registered at the home gateway device in advance.

Claim 2 (Original): The method of claim 1, further comprising:

transferring information received from the second communication device after transferring the prescribed message to the second communication device, from the home

gateway device to the first communication device through the access server device after applying a protocol conversion to the information.

Claim 3 (Original): A method of communications by making an access from a communication device located outside a home network to the home network, the method comprising:

transmitting a prescribed message from the communication device to an access server device corresponding to a home gateway device provided at the home network by specifying an access number/address corresponding to the home gateway device;

carrying out an authentication procedure for authenticating the communication device according to a prescribed authentication method between the access server device and the communication device upon receiving the prescribed message at the access server device;

transferring the prescribed message through a prescribed access network from the access server device to the home gateway device corresponding to the access number/address specified by the prescribed message, when the authentication procedure is successfully completed; and

transferring a home page containing information related to the home network which is selected according to the prescribed message, from the home gateway device to the communication device through the the access server device, when the prescribed message is received by the home gateway device from the access server device which is registered at the home gateway device in advance.

Claim 4 (Original): An access server device for carrying out access control with respect to a home gateway device of a registered home network, comprising:

a memory unit configured to store an authentication table registering in correspondence a first access number to be used in accessing the home gateway device which is a target of the access control by the access server device, a second access number to be used in accessing the access server device at a time of transmitting a prescribed message from a first communication device located outside the registered home network at which the home gateway device is provided, to the home gateway device or a second communication device on the registered home network, and an authentication method to be used in an authentication procedure for authenticating the first communication device between the access server device and the first communication device;

a first interface unit configured to receive the prescribed message from the first communication device by using the second access number;

a processing unit configured to carry out the authentication procedure between the access server device and the first communication device using the authentication method obtained by referring to the authentication table according to the second access number used in the prescribed message; and

a second interface unit configured to transfer the prescribed message to the home gateway device through a prescribed access network by using the first access number obtained by referring to the authentication table according to the second access number used in the prescribed message, when the authentication procedure is successfully completed.

Claim 5 (Original): The access server device of claim 4, wherein:

the second interface unit also receives information from the home gateway device after transferring the prescribed message to the home gateway device; and

the first interface unit also transmits the information received by the second interface unit to the first communication device.

Claim 6 (Original): The access server device of claim 5, wherein the information represents a home page containing contents regarding devices connected to the registered home network which is produced by the home gateway device.

Claim 7 (Original): The access server device of claim 5, wherein the information represents data in a prescribed format which is transmitted from the second communication device to which the prescribed message was transferred and which is applied with a protocol conversion at the home gateway device.

Claim 8 (Original): The access server device of claim 4, further comprising a unit configured to apply encryption processing or digital signature processing to communications with the home gateway device.

Claim 9 (Original): The access server device of claim 4, wherein the memory unit is capable of registering a plurality of home gateways.

Claim 10 (Original): The access server device of claim 4, wherein the access server device is provided by a communication service provider who provides the prescribed access network.

Claim 11 (Original): The access server device of claim 4, wherein the first interface unit carries out communications with the first communication device through an Internet.

Claim 12 (Original): The access server device of claim 4, wherein the second interface unit carries out communications with the home gateway device through a dedicated line.

Claim 13 (Original): The access server device of claim 4, further comprising:
a database unit configured to register data containing a control screen of each home electronic device that can be connected to the registered home network; and
a search unit configured to search through the database unit for data of an inquired home electronic device;
wherein the second interface unit also receives an inquiry message regarding an unknown home electronic device from the home gateway device, and returns a response message containing data of the inquired home electronic device obtained by the search unit in response to the inquiry message to the home gateway device.

Claim 14 (Original): The access server device of claim 4, further comprising a proxy unit configured to carry out a proxy server processing with respect to an access from the registered home network to outside of the registered home network, on behalf of each home gateway registered in the authentication table.

Claims 15 – 20 (Cancelled).